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ABSTRACT

In the preparation of a thesaurus for the Language Information Network and Clearinghouse System (LINCS), a number of already existing indexing tools was consulted. Many of these provide important secondary sources of terminology and of term relations, in addition to the primary sources available in original texts. Others are models of thesaurus construction, and some are indexing tools with which the LINCS thesaurus could interface. The discussion of indexing tools, which follows, first treats briefly two models of thesaurus construction (Project LEX and Roget's) which are relevant to LINCS, then discusses in some detail secondary terminology sources, their nature, and the way in which they can be used. Finally, the report considers the question of interface in view of the nature of several indexing tools in contact with LINCS. An appendix lists core terms in the LINCS collection of language oriented terms, as well as their intersection with another source. (Author/AM)

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CENTER FOR APPLIED LINGUISTICS

LANGUAGE INFORMATION NETWORK AND CLEARINGHOUSE SYSTEM (LINCS)

A SURVEY OF INDEXING TOOLS FOR THE LANGUAGE SCIENCES

By

Carolyn Jifford

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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PREFACE

In the preparation of a thesaurus for the Language Information Network and Clearinghouse System (LINCS), a number of already existing indexing tools will be consulted. Many of these provide important secondary sources of terminology and of term relations -- in addition to the primary sources available in original texts. Others are models of thesaurus construction, and some are indexing tools with which the LINCS thesaurus will probably interface in the future.

The discussion of indexing tools, which follows, first treats briefly two models of thesaurus construction which are relevant to LINCS, then discusses in some detail secondary terminology sources, their nature, and the way in which they can be used, and finally considers the question of interface in view of the nature of several indexing tools which will probably be in contact with LINCS.

1. Thesaurus Models

1.1. Project LEX

Since LINCS has decided to adapt the COSATI [18] guidlines for its own thesaurus construction, and since those guidelines are most fully exemplified in the Project LEX Thesaurus [20] the latter is a practical model for LINCS and useful in understanding guidelines. For example, the guidelines state that one should be able to say of a narrower term (NT) that it "is a" broader term (BT), e.g., a tree "is a" plant. However, the Project LEX thesaurus shows that this may be interpreted rather broadly in that it gives linguistics as a BT to phonology, which in a strict interpretation would mean that phonology "is a" linguistics, an assertion which is not acceptable at face value.

On the whole, Project LEX indicates feasible limits to the interpretation of the COSATI guidelines by illustration. It is a valuable reference tool for the job of thesaurus construction. Other recent thesauri based on the guidelines may also serve this function.

1.2. Roget's Thesaurus

Thesauri can be characterized as informative or merely correct. That is, in looking up a term X, the user (a) may find only the instruction "USE term Y," which gives him no way of telling whether term Y is what he wants, or (b) he may find the instruction "USE term Y" plus a structured list of terms related to Y so that he knows whether he wants to search for Y or for some other term, perhaps one related to Y. In case (b) the user does not have to riffle through the thesaurus a number of times before he can initiate his search.

The most famous of all thesauri is Roget's Thesaurus [49] first published in 1852 and still widely used. It can be of some help to LINCS in formulating an approach to the user of the thesaurus. The dictionary form of Roget's Thesaurus, as contrasted with the original, gives maximum help and information to the user. That is, at each entry it gives rather complete information as well as instructions as to where to find more.

The fact that Roget's Thesaurus continues to be sold and that it uses approach (b) rather than approach (a) is an indication that experience

has shown the value of being helpful to the user.

2. Terminology Sources

In discussing the sources of terminology, attention is focused below on the practical questions of when, how, and for what purpose each type or individual item can be used. Thus the sources are placed in four major divisions: (1) sources for initial construction, (2) sources for expansion, (3) sources for completion, (4) sources for long-range maintenance and updating.

The basic method of using indexing tools or other terminology sources is to incorporate a part or all of a given source into the thesaurus while deleting superfluous main entries through the USE notation, e.g. five and ten cent store USE dime store.

To incorporate simply means to merge the list of desired terms with the list of terms already in the thesaurus at that point in its development, tying in the given hierarchical relations (broader terms, narrower terms, related terms in a COSATI thesaurus) and making all apparent connections with items already in the thesaurus. For this merging, an alphabetical list of all terms in the thesaurus is extremely helpful. Use of the term 'merge' does not imply direct computer intervention. Rather, this is the normal human method for developing the list of thesaurus terms and relations. It involves making judgments about relative positions in a hierarchy, about the relative correctness of differing postulated relationships, and about the possibilities of coexistent but different sets of relationships.

These judgments can, to a large extent, be based on the information available in the indexing tools. Brief outlines and classification schemes are likely to be in general agreement with each other about the structure of the overall hierarchy even though each is likely to have a few terms not shared by other sources. Longer sources such as dictionaries and textbooks can be used to resolve differences.

The task of incorporation can be computer-aided provided a suitable program is available, the computer can generate reciprocals, thus enabling the thesaurus builder to be logically consistent. If he introduces a term X and asserts that it is related to some other term Y, the generation of reciprocals ensures that term Y will have as one related term (RT) the term X. Similarly if Y is

asserted to be a broader term (BT) to X, generation of reciprocals will make the statement that X is a narrower term (NT) to Y.

2.1. Sources for Initial Construction

In the initial construction of a thesaurus, it is obviously necessary to establish a first list of terms to which additions can then be made. Sources should be chosen for initial use on the basis of brevity, generality, classificatory nature, and orientation towards central areas of concern in the language sciences. Brevity and generality are not independent of each other. If fewer terms are used to describe an area, they will probably be more general terms. Sources which have classifications help provide some of the hierarchical information needed in a thesaurus. And finally, to be a thesaurus in the area of the language sciences, the thesaurus must be confined to that area when incorporating terms.

For the experimental pilot thesaurus [43] constructed for LINUS in the spring of 1969, a list of language specialities developed at the Center for Applied Linguistics was used as the basic list. Then three other rather general sources were incorporated: (a) terms from the Project LEX Thesaurus [20] under the headings of language and linguistics, (b) language related terms from the Human Relations Area Files Outline of Cultural Materials [34], sections 19 (language) and 20 (communications), and (c) terms from the ETIC classification [8]. The first two of these sources contributed very few further terms. Language is not their primary orientation, so the lists of terms were rather short and general, overlapping greatly with the basic list. The third contributed a good many terms, probably for two reasons: it is of British origin and thus there are national differences in terminology, and also since its primary concern is language teaching, the number of terms in the language area is great.

Further sources for initial construction are here grouped first by orientation and second by length: (1) sources devoted wholly to linguistic subjects (Section 2.1.1), and (2) sources with language-related sections (Section 2.1.2). In each group, the shorter sources can be incorporated into, and probably will add few terms to a basic list, while the longer sources may best be incorporated selectively.

2.1.1. Wholly Linguistic Sources

(a) Shorter Sources (all are tables of contents)

1. Linguistic Bibliography [18].

2. ERIC Clearinghouse for Linguistics, 1966 Selected Bibliography [22].

3. Rice and Guss, Information Sources in Linguistics [48].

4. Allen, Linguistics and English Linguistics [1].

5. Textbooks and other major books in the languages sciences, e.g. Saussure [51], Bloomfield [7], Hockett [32], Gleason [25], Sapir [50], Chomsky [14].

(b) Longer Sources (all are classification schemes)

1. Trager, "A Bibliographical Classification System for Linguistics and Languages," 1945 [45].

2. Classification of the Summer Institute of Linguistics Bibliography, 1967 [53].

3. Language Research in Progress thesaurus [1]

4. ETIC/CILT Classification [8].

5. Thesaurus of Bilingualism Descriptors [36].

6. Language and Language Behavior Abstracts [13].

The Linguistic Bibliography [18] is generally regarded as the main systematic library tool available to linguists, in spite of its non-currency and the difficulty of locating it in most libraries. Since it is in both French and English, its use early in thesaurus construction provides a first step towards a multilingual thesaurus. It contains less than 50 terms, excluding language names, and these terms are not extensively

interrelated. Language names are the first basis of division; then under each language, linguistic terms are used. The field is essentially divided into the following segments:

1. Bibliography and general (including also linguistic theory and method, typology, terminology, history of linguistics).
2. Phonetics and phonology (phonemics, historical phonetics, descriptive and experimental phonetics).
3. Grammar (morphology and syntax).
4. History of language.
5. Linguistic geography and dialectology.
6. Vocabulary (lexicography, etymology, semantics).
7. Script, orthography.
8. Stylistics.
9. Prosody, metre, versification.
10. Translation (general, mechanical translation).
11. Mathematical linguistics.
12. Philosophy, psychology, and sociology of language.
13. Miscellaneous (bilingualism, child language, aphasia, speech disorders, auxiliary languages).
14. Language teaching.
15. Onomastics.

Insofar as linguists have trained themselves to look at language in this way, these terms must be included as entry points at least.

The currently available ERIC source is the table of contents to 1966 Selected Bibliography in Linguistics and the Uncommonly Taught Languages [22]. ERIC has somewhat more importance than simply another table of contents in that it is a part of a nationwide information system and thus in the future probably will be the most generally available source

as well as being organizationally related to LINCS.

The Rice and Guss handbook [48] organizes the field in terms of fields within linguistics and interdisciplinary fields. It is brief and for some linguists has served as a very important reference work. Allen's bibliography [1] is also very brief. Though it concentrates on English linguistics, this paraliels the field of linguistics, especially in recent years.

Major books in linguistics vary considerably in how much the actual table of contents reflects the terminology of linguistics. Textbooks in particular, however, devote quite a bit of attention to terms. For example, each chapter of Hockett's introductory text [32] closes with a review of important terminology. In this same general area fall the catalogs published by companies such as Mouton, who are commercially concerned with directing users to books they could want.

Trager's classification is the most thorough yet done for linguistics. It appeared in articles in the journal Studies in Linguistics in 1945 and 1957. In his 1945 article, Trager said, "The arrangement of the subject matter of linguistics follows the general outlines used by all linguists. Detailed subdivisions have been worked out by me, using such library classifications as Library of Congress and Dewey's...for suggestions... [54, p. 56]. This source ought to be incorporated regardless of its length, since it represents a definitely linguistic approach. Trager's main divisions of "linguistic form" as he terms it are:

1. Writing
2. Phonology
3. Morphology
4. Syntax
5. Lexicology
6. Etymology
7. Semantics
8. Dialectology

9. Philology.

The classification scheme for work done by the Summer Institute of Linguistics [53] is a valuable information source on exotic languages. Also, it represents to some extent one of the major theories of linguistic description, namely tagmemics.

Language Research in Progress [11] lists documented research in linguistics and related fields. Its terms reflect the interest of researchers whose work is listed. The most elaborated categories in terms of (a) having subcategories and (b) being cross-referenced are the following ten in order of elaboration: verbal learning, phonetics, psycholinguistics, meaning, sociolinguistics, memory, word association, auditory communication, speech pathology, and common languages. These seem to focus somewhat more on psycholinguistics and speech than on the core of linguistics as expressed in the classifications of the Linguistic Bibliography and of Trager.

As mentioned above, the ETIC/CILT Classification [8] was used in the construction of an experimental pilot thesaurus, to which, as the fourth source incorporated, it added about 60 terms. The British Council maintains the English-Teaching Information Centre (ETIC) as a study centre and clearinghouse for information on all aspects of teaching English as a second or foreign language. The Centre for Information on Language Teaching (CILT) performs similar functions for all aspects of modern languages and their teaching. Together these centres maintain a language-teaching library and publish Language Teaching Abstracts, which includes a sizable number of purely linguistic documents.

The International Centre for Research on Bilingualism in Quebec is preparing a Thesaurus of Bilingualism Descriptors [36]. It might serve as a model of treatment of language vocabulary.

Language and Language Behavior Abstracts [13] is a fairly new publication. A look at its section headings indicates that its areas of interest are similar to those of Language Research in Progress. However, its document sources may be rather different. A thesaurus of 4,000 terms is forthcoming from the compilers of Language and Language Behavior Abstracts.

2.1.2. Sources with Language-Related Sections

a. Library classifications.

1. Dewey Decimal System [21].

2. Library of Congress [58].

3. Universal Decimal Classification [39, 50].

b. Other

1. Human Relations Area Files [37].

2. Bulletin Signaletique [10].

3. MLA Bibliography [45].

4. Social Science Documentation [37, 38].

5. CAL Collection of Language-Oriented Terms [41].

It is perhaps important to mention here that there are many terminology sources of a general nature which are of little use, in that they have very few language-related terms, and those are extremely general and scattered about. The source above have fairly well-defined sections dealing with language, with the exception of Social Science Documentation [37, 38], which in the edition reviewed had only a very few extremely general terms in either the sociology or the anthropology section.

Of the library sources, Dewey [21] is the briefest, with about 25 terms (pp. 448-9 of the 17th ed.). It can easily be incorporated and should be, because of its widespread use and availability.

Not surprisingly, the Library of Congress Table of Subdivisions (Vol. PJ-PM, pp. 229-38 or Vol. PB-PH, pp. 209-18) [58] shows considerable similarity to Trager's work in content and arrangement.

The Center for Applied Linguistics is working on modifying the Universal Decimal Classification (UDC)[34, 60] to better cover the language sciences. This should of course be incorporated into LINCS, hopefully in a form which can be officially authorized by the International Federation for Documentation (FID). Since the UDC is an internationally accepted general classification scheme, all of its entry points should also be entry points for LINCS.

The Human Relations Area Files Outline of Cultural Materials [34] was used in the experimental pilot thesaurus because anthropology is generally

felt to be the disciplinary context within which language most fully belongs. Because of the discursive nature of the outline, the number of specific terms is small. Language seems to be covered under two heads, language and communication. The final thesaurus can easily include these terms, increasing the usability of LINCS by anthropologists.

Section 21 of the Bulletin Signaletique [10] includes "sciences du langage" for which the table of contents is another brief classification (in French) of language sciences. This can easily be incorporated, in either language. Probably no entries in French should be made until use of that language and related policies have been introduced.

The portion of the MLA Bibliography [45] dealing with linguistics can easily be incorporated also. In general, after the first two or three brief classification schemes have been incorporated, it is to be expected that each additional classification will add only a few terms. However, in each of the general classifications, each term is considered relatively important and hence ought to be integrated in a completely general information system.

The CAL collection of language-oriented terms [41] was put together by Kathleen P. Lewis for the LINCS project from a group of thesauri with language-related interests. This list, of approximately 2,000 terms is described more fully in the last section of this paper. Suffice it to say here that the 400 terms in that list which are most centrally linguistic could be incorporated into the thesaurus either at this stage or the next.

In a four-stage approach to thesaurus construction the first stage calls for tentatively incorporating all usable purportedly general classifications of linguistics or linguistic subfields and then subsequently pruning out unusable items and correcting inconsistencies or resolving them by scope notes and the like. The vocabulary of the thesaurus at this stage is quite general and of the sort which will almost certainly be included in the final product.

2.2. Sources for Expansion

The goal of the second stage is to fill out the body of the thesaurus, so that it fairly represents the field of the language sciences.

It is important to recognize that in building a thesaurus, we are concerned with two types of terms: (a) ENTRY POINTS, which should be provided both

for the specialist and for the non-specialist, and (b) CORE TERMS, which should be correctly related to each other, to the literature to be searched, and to the entry points. The core terms may well be the primary entry points for specialists and hence can be considered a subset of the entry points. Further, to a large extent these terms are the ones which are entered first and about which the thesaurus is built.

Selection of entry points should be based primarily on the commonness of the term. Hence, for example, the term 'primitive language' might be an entry point, with perhaps 'USE exotic language' and 'RT ethnolinguistics' to guide the user further. Our sources for entry points must reflect the terms people think of when they have questions (information needs) about language. Thus, widely used traditional and popular terms must be found and included.

Core term relations will evolve as the thesaurus maker proposes hierarchial relationships, tests them, and incorporates criticisms offered by reviewers at every stage. Among the relevant documentary sources here are reliable dictionaries and articles about terminology. As more terms are added, it becomes more and more important to make all appropriate connections to guide the user successfully from the terms in which he conceives of his information need to the terms in which the need is filled in a document.

The following sources will be important in expanding the thesaurus vocabulary:

1. H. A. Gleason, Jr., A Dictionary of Linguistics Terminology [25].

2. Eric P. Hamp, A Glossary of American Technical Linguistic Usage: 1925-50 [30].

3. Mario Pei, Glossary of Linguistic Terminology 1966 [47].

4. Webster's Third International Dictionary [64].

5. Indexes to major works in various language science specialities.

6. Work on language learning and teaching.

When complete, Gleason's dictionary [25] will be very nearly definitive and comprehensive. The relationships of troublesome terms can certainly be clarified by referring to Gleason's definitions.

Hamp's Glossary [30] has a very useful introduction in which he both documents the terms found in the glossary and indicates where terms can be found to take the user past 1950. His sources for both included and newer terms are textbooks and important book or papers. Consulting this book is a must for expanding the LINCS thesaurus. Among other virtues, it clearly describes its principles of selection and method of construction. Furthermore, it has a Russian translation.

Because of its relative brevity the general accessibility, Pei's revised glossary [47] should be a major source of terms for the LINCS thesaurus. It would be good if the user of LINCS, finding a term in Pei, could use that term in approaching the LINCS thesaurus. Thus, it is not so much the entries in Pei which should be incorporated, but the terms he uses in definitions, what the user learns by going to Pei. William Gates' review of the glossary can be of assistance in making best use of this source [24]. The importance of this source lies in the fact that most libraries, academic and small-town, have Pei on their shelves, so many entry points are generated from this glossary.

Webster's Third [64] asked linguists for help in selecting and defining linguistic terms. It is both authoritative and widely used. Again, as with the previous sources, each dictionary entry is likely to reveal rather explicitly the three COSATI relationships of NT, BT, and RT simply in the logic of the definition. Thus, they are not only sources of terms, but more importantly, sources of information on some more or less widely accepted views of their logical or pragmatic relationships.

In referring to indexes to major works in the language sciences, we have changed our emphasis from classification as in a table of contents, to simple listing of important terms. It may be noted that if the thesaurus is kept alphabetical, comparisons with indexes (also alphabetical) will be work of an essentially clerical nature. Other sources in the literature can be used, such as various specific bibliographies, discussions of terminology, etc.

Books dealing with language learning and language teaching will include terms of wide user interest. To be noted in this regard are Blair [6], Narveson [46], Steible [52], and Walsh [63]. Each of these is designed to help the student of language or literature to deal with the linguistic terms which he encounters.

2.3. Sources for Completion

The third stage of thesaurus construction is concerned with making the

thesaurus complete. Sources used at this stage fill in gaps in new terminology, popular terms, and new areas, and provide multilingual equivalents if the thesaurus is to be made multilingual. Also at this stage it is necessary to make sure that the terminology in the thesaurus is systematically arranged. For example, terms from various theoretical schools need to be balanced; assuming that two schools cover the same ground, it would be misleading to have one school represented only by terms in phonology and another only by terms in syntax.

The sources which could be of use in putting the thesaurus together are varied. The basic need is to examine each area for completeness and balance and then to correct deficiencies. The following will be discussed:

1. C. F. Voegelin "A Sample of Technical Terms in Linguistics" 1948 [62].

2. Articles about terminology in Studies in Linguistics by Hall [28] and Hockett [29] and similar articles.

3. Books dealing with specific theoretical schools of linguistics, e.g. Vachek and Dubsky, Dictionnaire de Linguistique de l'Ecole de Prague [61].

4. Reference works in language-related fields [42].

5. Experiments with the terminology of the language sciences.

6. Multilingual dictionaries, e.g. Marouzeau Lexique de la Terminologie Linguistique [44]. Axmanova Slovar' Lingvisticeskix Terminov [5].

7. Monolingual non-English dictionaries, e.g. Felice [23], Godel [27].

Voegelin's article includes a large number of linguistic terms drawn from articles by Sturtevant, Sapir, Bloomfield, Harris, and Trubetzkoj in the areas of structural linguistics, historical linguistics, dialect geography, and linguistic typology. Unless it has been clearly incorporated in one of the other sources, such as Hamp or Gleason, each term must be checked before the thesaurus can be called complete.

The articles by Hall and Hockett in Studies in Linguistics deal respectively with the basic terms in linguistics and with terms in historical linguistics.

Although SIL has devoted considerable space to questions of terminology, it is not the only journal to consider terminology. The bibliographical listing prepared by Kathleen P. Lewis for LINCS, "Indexing tools and terminology sources in the language sciences," [42] includes a number of articles in various languages on linguistic terminology.

To round out the picture of various theoretical viewpoints given in LINCS, it will be necessary to consult specific sources for each school. Worth mentioning, in addition to the Dictionnaire of Vachek and Dubsky, are Hjelmslev's Prolegomena to a Theory of Language [31] which devotes a chapter to definitions, and books by people in the various newer schools such as Chomsky, Pike, Lamb, and Halliday.

Interdisciplinary areas also need special attention to make sure that coverage is not spotty. Reference books in the Lewis bibliography [42] should be consulted.

For purposes of information retrieval, it is normal to construct a thesaurus from index terms which were selected from a real corpus of documents. It would be wise not to neglect the kind of experimentation that often accompanies the more empirical approach to thesaurus construction. Thus non-documentary sources of information about the terminology of the language sciences include experiments in free indexing of linguistic documents (treating all index terms as candidates for inclusion in the thesaurus), experiments in retrieval of information for users (all terms used by users to be included in the thesaurus as needed entry points), statistical studies of important language science literature (where the statistics could be merely tabulation of terms used), and questionnaires about terminology.

Assuming that the thesaurus is to be multilingual, this is the point at which conversions can be made. It may be a programmable operation to look up all the English terms in the thesaurus in the multilingual dictionaries and get equivalents. Note that we either assume that English is the pivot language in which both indexing and searching is done or that some multilingual arrangements can be made about processing. One possibility is to treat as English words all non-English words which have no popular English equivalents. The dictionaries listed have several languages. Marouzeau has French, English, German, Italian, and Russian (Russian only in the Russian translation by Andreev); Axmanova has Russian, English, French, German, and Spanish. Other smaller scale multi-or bilingual dictionaries are cited in the Lewis bibliography [42].

Monolingual non-English dictionaries may be the main source of information about terminologies used in non-English theoretical schools. Godel deals with Saussurian terminology and Felice with the school of Ascoli.

2.4. Sources for Long-Range Maintenance and Updating

Only a prophet could really say what sources will be useful in the future. However, certain sources can be expected to be updated periodically because of their function. These sources are brought together here. All of the names sources were also mentioned above. The sources are placed in three groups: (1) general, (2) specific, (3) direct. The direct sources will have least lag, because they represent the document or user very directly. The specific sources are next most current, because they represent the document or user very directly. The specific sources are next most current, because they deal with circumscribed areas where there is some some concern about keeping abreast of things among people working in that area. The general sources have most lag, because language-related materials are only a part of their responsibility or because they are responsible for very nearly the whole field of language sciences.

a. General Sources:

1. Bulletin Signaletique [10].

2. Linguistic Bibliography [15].

3. ERIC Clearinghouse for Linguistics [22].

4. MLA Bibliography [45].

5. Project LEX Thesaurus [20].

b. Specific Sources:

1. ETIC/CILT classification [8].

2. Summer Institute of Linguistics Bibliography [53].

3. Language Research in Progress [11].

4. Language and Language Behavior Abstracts [13] and its thesaurus.

c. Direct sources:

1. Experiments in free indexing, information retrieval, word statistics.

2. Indexes, tables of contents and reviews of new books, issues of journals, review articles, bibliographies on specific topics, new popularizations.

3. Interfaces with LINCS

When we speak of interfaces, we are of course primarily concerned with systems which will be functioning in some way when LINCS is in full operation. Of course many information systems are concerned with linguistics only in a most peripheral way. It is highly unlikely that LINCS will interact with them. A user who would come to LINCS would not also go for example to Chemical Abstracts for the same information. The systems most likely to interface with LINCS are the systems from which K. Lewis extracted terms to be examined in the initial stages of the LINCS project [41], or systems very similar to them. Her sources include the following:

1. dsh Abstracts, published by the American Speech and Hearing Association [3], abbreviated dsh.

2. Language Research in Progress thesaurus [11] abbreviated lrp. As mentioned above, this is essentially a linguistic source with leanings towards psycholinguistics and speech.

3. Western Reserve University Education Thesaurus [12] abbreviated wru.

4. National Library of Medicine [16] abbreviated nlm.

5. Defense Documentation Center [19] abbreviated ddc.

6. Project Lex, Department of Defense [20] abbreviated lex.

7. Human Relations Area Files, Outline of Cultural Materials [34], abbreviated hrf.

8. The Johns Hopkins University Information Center for Hearing,Speech and Disorders of Human Communication [35], abbreviated jhu.

9. Medical Subject Headings [56], abbreviated msh.

10. Thesaurus of ERIC Descriptors [57], abbreviated erc.

Approximately 2,000 of the Lewis entries were listed on a computer printout. To get some idea of the relationship of these entries to probable terms of the LINCS thesaurus, the printout was examined for terms which reasonably could be said to be relevant to linguistics, the core field of the language sciences. The list of core terms and the sources from which they were taken is given in the Appendix. This represents a fair proportion of the total list of language-related terms extracted from the interface sources, 403 terms appearing a total of 635 times; i.e., 635 of the 2,156 entries in the list fall within the domain of linguistics as characterized by this investigator.

What does this mean in terms of interface operations? It means at least that users who go to these sources for information in these areas could better profit from access through LINCS to the literature of linguistics. The sources vary considerably in their area of concentration in language. Table 1 shows how this works out numerically. For each of the following general areas, the number of terms in that area in each of the sources is given: phonology, grammar, semantics, general, and language names. Many terms occur in more than one source, so the total of terms by sources in a given area is larger than the actual total number of different terms in that area. The highest number in each column and each row is circled to indicate concentrations of terminology. It must be pointed out that the sources differ considerably in length, the most obvious difference being that the Human Relations Area Files source suggests terms for use by people rather than explicit terms for use by a computer.

The sources which show the most overlap with linguistics are Language Research in Progress, the Johns Hopkins thesaurus, and the ERIC thesaurus. ERIC is heavy on language names; Johns Hopkins has nearly all the phonology terms on the list; and Language Research in Progress is high in all categories except language names. The Appendix shows exactly how this works out, and what each of the categories includes.

Table 1. Number of Terms in Each General Linguistic Area in Each of Ten Language-Related Sources*

		dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Phonology	107	8	21	10	3	6	13	2	81	5	20
Grammar	55	0	19	11	4	6	6	1	16	0	22
Semantics	37	1	18	6	3	3	4	2	4	3	10
General	87	4	41	9	9	5	12	4	18	8	43
Language Names	121	0	8	7	0	2	16	0	14	0	117
Total		13	107	43	19	22	51	9	133	16	222

403 different terms

635 tokens

* The highest number in each column and each row is circled to indicate concentrations of terminology.

It seems appropriate to include all of these central terms in the thesaurus in view of the fact that they can serve not only as useful terms in the LINCS thesaurus, but also as links between the thesaurus and these other indexing tools. Conceiveably each term in LINCS that does appear in the same sense in an interfacing retrieval tool could be coded to indicate the tool in which it appears.

The most important services to the user may be to help him know where to look. If a user comes to the "wrong" system, that system will be most useful if it can tell him what other system may be able to help him. One possible way to do this could be for each system in a related group of systems to have a master thesaurus containing all terms in all connected systems, as of some recent date. For systems which are most closely related, there might be a computerized link leading from one into the next via the terms shared by the systems. To the extent that systems share not only terms but source documents, the same documents may be reached by different routes in different systems. If the whole of Language Research in Progress and its source documents are incorporated into LINCS, then LINCS will have made a commitment to psycholinguistics which will put it somewhat deeper in contact with some of the other sources. This might require an extensive study of overlap with Psychological Abstracts [2], a task which has not yet been done. Similarly connections with information science [17] and computer science [4] may need to be carefully explored.

APPENDIX

CORE TERMS IN THE LINCS COLLECTION OF LANGUAGE ORIENTED TERMS

The sources used in this appendix are those discussed in section 3, Interfaces with LINCS:

dsh - dsh Abstracts of American Speech and Hearing Association [3];

lrp - Language Research in Progress [11];

wru - Western Reserve Education Thesaurus [12];

nlm - National Library of Medicine [16];

ddc - Defense Documentation Center [19];

lex - Project LEX [20];

hrf - Human Relations Area Files [34];

jhu - Johns Hopkins (speech related) [35];

msh - Medical Subject Headings [56];

erc - ERIC Descriptors [57].

Terms are grouped by general areas of linguistics to which they are related. An x at the intersection of a term and a source means that that term is found in that source.

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsb	arp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
1. Phonology										
Acoustic Phonetics								x		x
Articulation	x		x					x		x
Auditory --		x	x		x	x		x		x
Babbling								x		
Back Vowels								x		
Bilabial								x		
Central Vowels								x		
Click --								x		
Coarticulation								x		
Consonant Clusters								x		
Consonant phoneme								x		
Consonants			x					x		x
Dental								x		
Diacritical Mark --										x
Diphthongs			x					x		
Discrimination								x		
Distinctive Features		x								x

Core Terms in the LINGS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	ash	erc
Experimental Phonetics				x						
Flaps								x		
Force of Articulation								x		
Formant								x		
Fricatives								x		
Front Vowels								x		
Glottis								x		
Hard Palate								x		
High Vowels								x		
Homonyms								x		
Homophones			x					x		
Inflection								x		
Instrumental Phonetics				x						
Intelligibility		x	x		x	x		x		
Intensity						x				
Intonation		x	x							x
Intonation Contours		x	x							x
Labiodental								x		
Laryngeal								x		

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Larynx	x							x	x	
Lateral Fricatives								x		
Laterals								x		
Lenis-Fortis Distinction								x		
Lips								x		
Loudness								x		
Low Vowels								x		
Manner of Articulation		x								
Mid Vowels								x		
Mouth								x		
Nasality		x						x		
Neutral Vowels								x		
Palate								x		
Pharynx	x							x		
Phonation								x		
Phoneme Boundaries		x								
Phoneme-Grapheme Corr.		x								
Phonemes	x	x	x			x		x		x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Phonemic								x		
Phonemic Alphabets										x
Phonemic Identification								x		
Phonemicization		x								
Phonemics						x				
Phonetics	x	x			x	x		x	x	x
Phonetic Structure								x		
Phonetic Systems								x		
Phonetic Transcription										x
Phonetic Transitions								x		
Phonological Structure								x		
Phonological Units										x
Phonology		x		x		x	x	x		x
Pitch		x				x		x		
Place of Articulation		x								
Pronunciation		x	x					x		x
Prosodic Features		x								
Prosody								x		

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Romanization										x
Rounded Vowels								x		
Segmental Features of Speech								x		
Semivowels								x		
Sonograms/phs.								x		
Sound								x		
Sound Analys--						x		x		
Sound Spectrograms								x		
Sound Spectrum								x		
Spectrograms/Phs/Phic Anal.		x						x		
Speech	x		x		x	x	x	x	x	x
Speech Habits										x
Speech Recognition		x			x	x				
Speech Representation					x	x				
Speech Synthesis		x						x		
Stops								x		

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Suprasegmental Features								x		
Suprasegmental Transitions								x		
Surds								x		
Syllabic								x		
Synthetic Speech		x								
Tongue	x							x		
Transliteration						x				
Trills								x		
Unrounded Vowels								x		
Uvula								x		
Velar								x		
Vocal Cord--	x							x	x	
Vocalizations, Infant		x								
Vocoids										x
Voice								x	x	
Voiced								x		
Voiceless								x		

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Vowel Clusters								x		
Vowels								x		
2. Grammar										
Adjectives			x							x
Adverbs			x					x		
Ambiguities, Syntactic		x								
Basic Language Patterns										x
Clause Embedding		x								
Constituent Structure		x								x
Context Free Grammar					x					x
Context Sensitive Grammar					x					
Contextual Restraints								x		
Deep Structure										x
Dependency Theory		x								
Determiners										x
Discourse Analysis		x								
Embedding		x							x	

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Form Classes										x
Function Words				x						x
Generative Grammar		x						x		
Grammar			x	x			x	x		x
Grammars					x	x				
Grammatical Analysis								x		
Grammatical Principles								x		
Grammatical Structure		x								
Grammatical Theories		x								
Hierarchies of Grammaticalness		x								
Idiom			x							
Kernel Sentences										x
Language Patterns										x
Linguistic Patterns										x
Morpheme(s)				x		x				
Morphemics		x								
Morphology		x				x				x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	vru	nlm	ddc	lex	hrf	jhu	mch	erc
Morphophonemics										x
Nominalizations		x								
Nouns			x					x		
Nouns Systems		x								
Parts of Speech								x		
Phrase Structure Grammar(s)					x	x				
Prefixes			x							
Prepositions			x							
Pronouns			x					x		x
Sentence(s)			x					x		x
Sentence Structure								x		
Structural Analysis										x
Structural Grammar										x
Structural Linguistics								x		x
Surface Structure										x
Syntax		x		x	x	x		x		x
Tagmemic Theory		x								

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	mch	erc
Transformation Generative Grammar										x
Transformation Theory		x								
Transformational Grammar(s)					x	x		x		
Verb(s)			x					x		
Verb Systems		x								
Word(s)			x							
Words, Frequency		x						x		
3. Semantics										
Ambiguities, Lexical		x								
Categories of Meaning		x								
Concept--		x	x			x		x	x	x
Content Analysis		x								
Definitions						x				
Dictionaries		x	x		x	x		x		x
Etymology										x
Glossaries		x								x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lcx	nrf	jhu	msh	erc
Lexicography		x								x
Lexicons										x
Meaning		x	x							
Multiple Meaning		x								
Names		x								
Onomastics		x								
Referent				x						
Semantic(s)	x	x		x	x	x	x	x	x	x
Semantic Analysis		x								
Semantic Satiation		x								
Semantic Structure		x								
Semiotics		x		x						x
Speaking Vocabulary			x							
Synoym Lists		x								
Vocabulary			x		x		x	x	x	x
Vocabulary Acquisition		x								
Vocabulary Building			x							x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	mah	erc
4. General										
Applied Linguistics										x
Bilingual--	x	x		x		x				x
Child Language---		x		x						x
Codes--		x		x						
Coding		x	x		x	x		x		
Computational Linguistics						x				x
Concordances		x								
Contact, Languages in		x								
Contrastive Language Analysis										x
Contrastive Linguistics										x
Contrastive Studies		x								
Descriptive Linguistics										x
Diachronic Linguistics										x
Diachronic Processes		x								
Dialect--		x	x	x				x		x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lxp	wsu	nlm	dde	lex	hrf	jhu	msh	erc
Diglossia										x
English/Second Lang.										x
Ethnolinguistics		x								
Exotic Languages		x								
Expressive Language										x
Fluency		x	x					x		
Frequency--		x								
Genetic Studies of Language		x								
Glottochronology										x
Graphemes/ics		x								x
Historical Linguistics		x								
Ideograph			x							
Idiolect				x						
Interference		x								
Jargon										
Kinesics		x						x		
Language	x				x		x	x	x	x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wru	nlm	ddc	lex	hrf	jhu	msh	erc
Language Acquisition								x		
Language Classification										x
Languages in Contact	x									
Language and Culture	x									
Language Level		x	x	x				x		x
Language Interrelationship										x
Language Origins								x		
Language Performance Models		x								
Language Research										x
Language Standardization										x
Language Typology										x
Language Universals				x						
Lexicostatistics		x								
Lingua Francas						x				x
Linguistic Analysis								x		

Core Terms in the LINCS Collection of Language-Oriented Terms

Terms	Source									
	dsh	lcp	wru	nlm	ddc	lcs	hrf	jhu	msh	erc
Linguistic Identification							x			
Linguistic Interference		x								
Linguistic Segments								x		
Linguistic Theory										x
Linguistics			x	x	x	x		x	x	x
Literacy			x							x
Machine Translation		x			x	x				x
Mathematical Linguistics		x								x
Models		x								
Multilingual Comparisons		x								
Multilingualism		x				x				x
Neglected Languages		x								
Nonstandard Dialects										x
Origin of Language								x		
Orthograph--		x								x
Paralanguage		x						x		x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsb	lrp	wru	nlm	ddz	lex	hrf	jhu	msh	erc
Performance					x	x				
Philology									x	
Philology, Classical									x	
Philology, Romance									x	
Pidgin(s)								x		x
Psycholinguistics		x		x		x		x	x	x
Rhetoric		x								x
Second Language Learning		x		x						x
Social Dialect(s)		x								x
Sociolinguistics		x								x
Speaker Identification								x		
Special Languages							x			
Spelling			x							x
Statistical Linguistics						x				
Stylistics		x					x			
TEFT										x
TENL										x

Core Terms in the LINCS Collection of Language-Oriented Terms

Term	Source									
	dsh	lrp	wrw	nlm	ddc	lcs	hrf	jhu	msh	erc
Translation		x				x		x	x	x
Uncommon Languages		x								
Universals of Language		x								
Unwritten Languages										x
Urban Language		x								x
Writing						x			x	x
Writing Systems		x								x
5. Names of Individual Languages		8	7		2	16		14		117

REFERENCES

[1] Allen, H.B. "Table of Contents." Linguistics and English Linguistics. New York: Appleton-Century-Crofts, 1966.

[2] American Psychological Association. Printout of terms used in indexing Psychological Abstracts. Washington, D.C.: APA.

[3] American Speech and Hearing Association and Gallaudet College. dsh Abstracts. Washington, D.C.: ASHA.

[4] Association for Computing Machinery. Comprehensive Bibliography of Computing Literature. Permuted and Subject Index to "Computing Reviews" 1966. New York: ACM, 1966.

[5] Axmanova, O.S. Slovar' lingvističeskix terminov [Dictionary of Linguistic Terminology]. Moskva: Izd. "Sovetskaja enciklopedija," 1966.

[6] Blair, Janette H. A Glossary of Language Learning Terms. London: Blackie & Son Ltd., 1963.

[7] Bloomfield, Leonard. Language. New York: Holt, Rinehart & Winston, 1933.

[8] The British Council. ETIC/CILT Classification. [Mimeo., n.d.]

[9] British Standards Institution. "4. Philology. Linguistics. Languages." Universal Decimal Classification. B.S. 1000A: 1961. FID No. 289. Abridged English Edition. London: BSI, 1961.

[10] Bulletin signaletique. 21. Sociologie. Ethnologie. Sciences du langage. "Table of Contents."

[11] Center for Applied Linguistics. "Thesaurus." Language Research in Progress: 5. Washington, D.C.: Center for Applied Linguistics, 1967.

[12] Center for Documentation and Communication Research, Western Reserve University. The Preparation of a Thesaurus of Educational Terms. Final Report. Cleveland, Ohio: Western Reserve University, 1966.

[13] Center for Research on Language and Language Behavior. Thesaurus for Language and Language Behavior Abstracts. Ann Arbor, Michigan: CRLLB. [In preparation.]

[14] Chomsky, Noam. Aspects of the Theory of Syntax. Cambridge, Massachusetts: M.I.T. Press, 1965.

[15] Comité Internationale Permanent des Linguistes. "Table of Contents." Bibliographie linguistique de l'année 1965/ Linguistic Bibliography for the Year 1965. Utrecht/Antwerp: Spectrum, 1967.

[16] Committee on Brain Sciences, National Academy of Sciences, National Research Council, National Academy of Engineering. Behavioral Sciences Indexing for the National Library of Medicine: A Task Force Report. Washington, D.C.: National Academy of Sciences, 1967.

[17] Committee on Information Retrieval Teminology, American Documentation Institute. Information Retrieval Vocabulary. Washington, D.C.: American Documentation Institute, 1964.

[18] Committee on Scientific and Technical Information (COSATI). Guidelines for the Development of Information Retrieval Thesauri. Washington, D.C.: COSATI, 1967.

[19] Defense Documentation Center. Thesaurus of DDC Descriptors. Alexandria, Virginia: Defense Documentation Center, 1966.

[20] Department of Defense. Thesaurus of Engineering and Scientific Terms (TEST). Washington, D.C.: Government Printing Office. [Produced by Project LEX.]

[21] Dewey, Melvil. Dewey Decimal Classification and Relative Index. 16th ed. Lake Placid Club, New York: Forest Press, 1958.

[22] ERIC Clearinghouse for Linguistics. "Table of Contents." 1966 Selected Bibliography in Linguistics and the Uncommonly Taught Languages. Washington, D.C.: ERIC Clearinghouse for Linguistics, Center for Applied Linguistics, 1967.

[23] Felice, Emilio de. La terminologia linguistica di G.I. Ascoli e della sua scuola [The Linguistic Terminology of G.I. Ascoli and His School]. Publication of the Committee for Terminology, C.I.P.L. Utrecht: Spectrum, 1954.

[24] Gates, William. "Review of Pei's Glossary of Linguistic Terminology." Language 44(1968):317-25.

[25] Gleason, H.A., Jr. A Dictionary of Linguistic Terminology. [In preparation.]

[26] Gleason, H.A., Jr. An Introduction to Descriptive Linguistics. Rev. ed. New York: Holt, Rinehart & Winston, 1961.

[27] Godel, R. Les sources manuscrites du "Cours de linguistique générale" de F. de Saussure [The Manuscript Sources for the "Course in General Linguistics" of F. de Saussure]. (Soc. de Publ. Romanes et Françaises 61.) Geneva: Droz; Paris: Minard, 1957. [Contains a lexicon of Saussurian terminology.]

[28] Hall, Robert A., Jr. "Terminological Notes." Studies in Linguistics 13(1958):71-72.

[29] Hamp, Eric P. "Selected Summary Bibliography of Language Classification." Studies in Linguistics 15(1960).

[30] Hamp, Eric P. A Glossary of American Technical Linguistic Usage:1925-1950. (Publication of the Committee for Terminology, C.I.P.L.) Utrecht/Antwerp: Spectrum, 1957. [Russian translation: V.V. Ivanov, Slovar' amerikanskoj lingvističeskoj terminologii. Moskva: Izd. "Progress," 1964.]

[31] Hjelmslev, Louis. Omkring Sprogteoriens Grundlaeggelse. Copenhagen, 1943. [Translated by Francis J. Whitfield, Prolegomena to a Theory of Language. Rev. English ed., Madison: University of Wisconsin Press, 1961.]

[32] Hockett, Charles F. A Course in Modern Linguistics. New York: Macmillan, 1958.

[33] Hockett, Charles F. "The Terminology of Historical Linguistics." Studies in Linguistics 12(1957):57-73.

[34] Human Relation Area Files. "Table of Contents." Outline of Cultural Materials. New Haven, Connecticut: Human Relations Area Files, 1967.

[35] Information Center for Hearing, Speech and Disorders of Human Communication. Thesaurus. Pilot Edition. Baltimore, Maryland: The Johns Hopkins Medical Institutions, 1968.

[36] International Center for Research on Bilingualism. [Thesaurus of Bilingualism Descriptors]. Quebec, 1968.

[37] International Committee for Social Sciences Documentation. "Classification Scheme." International Bibliography of Social and Cultural Anthropology. Paris: UNESCO, 1963.

[38] International Committee for Social Sciences Documentation. "Classification Scheme." International Bibliography of Sociology. Paris: UNESCO, 1965.

[39] International Federation for Documentation (FID). P [Note] 800: Transfer of Linguistics from UDC 4 to 8. The Hague: FID, 1963.

[40] International Federation for Documentation (FID). P [Note] 929: Languages. The Hague: FID, 1968.

[41] Lewis, Kathleen. Collection of language-oriented terms. [Center for Applied Linguistics working file.]

[42] Lewis, Kathleen. Indexing Tools and Terminology Sources in the Language Sciences. (LINCS #2-68, NSF GN-653) Washington, D.C.: Center for Applied Linguistics, 1968.

[43] LINCS. Experimental pilot thesaurus. [Center for Applied Linguistics working file.]

[44] Marouzeau, Jules. Lexique de la terminologie linguistique [Dictionary of Linguistic Terminology]. 3rd ed. Paris: Geuthner, 1951. [Russian translation: N.D. Andreev, Slovar' lingvističeskix terminov, Moskva: Izd. inostrannoj literatury, 1960.]

[45] Modern Language Association of America. "Table of Contents." MLA International Bibliography of Books and Articles on the Modern Languages and Literatures. New York: Modern Language Association of America; University Park: Pennsylvania State University Press. Yearly.

[46] Narveson, Bert H. Functional Grammar Terms for Language Students. Northfield, Minnesota: St. Olaf College Press, 1952.

[47] Pei, Mario. Glossary of Linguistic Terminology. Rev. ed. New York and London: Columbia University Press, 1966.

[48] Rice, Frank, and Allene Guss. Information Sources in Linguistics. Washington, D.C.: Center for Applied Linguistics, 1965.

[49] Roget's Thesaurus. New York: Washington Square Press, 1961.

[50] Sapir, Edward. Language: An Introduction to the Study of Speech. New York: Harcourt, Brace & World, 1921.

[51] Saussure, Ferdinand de. Cours de linguistique générale. Paris: Payot, 1961. [English translation: Wade Baskin, Course in General Linguistics, New York: Philosophical Library, 1959.]

[52] Steible, D. Concise Handbook of Linguistics. London: Peter Owen, 1957.

[53] Summer Institute of Linguistics. "Classification of the SIL Bibliography 1967." Santa Ana, California: Summer Institute of Linguistics. [Unpublished.]

[54] Trager, G.L. "A Bibliographical Classification System for Linguistics and Languages." Studies in Linguistics 3(1945):54-108.

[55] Trager, G.L. "Revisions to 'A Bibliographical Classification System: 2'." Studies in Linguistics 9(1951):91-93.

[56] U.S. Department of Health, Education, and Welfare. "Medical Subject Headings 1967." Index Medicus 8. Washington, D.C.: U.S. Government Printing Office, 1967.

[57] U.S. Department of Health, Education, and Welfare. Thesaurus of ERIC Descriptors (First Edition). Washington, D.C.: U.S. Government Printing Office, 1967.

[58] U.S. Library of Congress. Subject Cataloguing Division. "Class P, subclasses PB-PH: Modern European Languages (with supplementary pages)." Classification. Washington, D.C.: U.S. Government Printing Office, 1933. [Reprinted 1966.]

[59] U.S. Library of Congress. Subject Cataloguing Division. "Class P, subclasses PJ-PM: Languages and Literature of Asia, Africa, Oceania, America, Mixed Languages, Artificial Languages (with supplementary pages)." Classification. Washington, D.C.: U.S. Government Printing Office, 1935. [Reprinted 1965.]

[60] "Universal Decimal Classification: Special Subject Edition for the Language Sciences." Unofficial working copy prepared by the Linguistic Documentation Program of the Center for Applied Linguistics.

[61] Vachek, Josef, and Josef Dubsky. Dictionnaire de linguistique de l'école de Prague [A Prague School Dictionary of Linguistics]. Utrecht/Antwerp: Spectrum, 1960. [Russian translation: I.A. Mel'čuk, and V.Z. Sannikov, Lingvističeskij slovar' pražskoj školy.]

[62] Voegelin, C.F. "A Sample of Technical Terms in Linguistics." International Journal of American Linguistics 14(1948).

[63] Walsh, Donald D. What's What: A List of Useful Terms for the Teacher of Modern Languages. 3rd ed. New York: Modern Language Association, 1965.

[64] Webster's Third International Dictionary. Springfield, Massachusetts: G. and C. Merriam Co., 1961.